

CLAIMS

I claim:

- 1 1. An injection plate for positioning in a stream of fuel and air moving from a
2 carburetor to the inlets of fuel runners of an internal combustion engine for injecting fuel
3 and nitrous oxide into the fuel runners, said injection plate comprising:
4 a frame defining a frame opening for surrounding the stream moving from the
5 carburetor, said frame having a fuel passage and a nitrous oxide passage;
6 a fuel injection tube extending across said frame opening and mounted at its ends
7 to said frame and having an external surface and an internal passage in communication
8 with said fuel passage of said frame;
9 a nitrous oxide injection tube extending across said frame opening and mounted at
10 its ends to said frame and having an external surface and an internal passage in
11 communication with said nitrous oxide passage of said frame; and
12 a plurality of nitrous oxide delivery ports formed in said nitrous oxide injection
13 tube, each said nitrous oxide delivery port configured to direct nitrous oxide in a direction
14 to flow toward the inlet of one of the runners.

- 1 2. The injection plate of claim 1, wherein at least some of said plurality of
2 nitrous oxide delivery ports of said nitrous oxide tube have a bore with an axis extending
3 from said nitrous oxide tube in a direction to direct nitrous oxide toward one of the
4 runners.

1 3. The injection plate of claim 2 wherein some of said nitrous oxide delivery
2 ports are oriented with their axes coaxial with respect to the longitudinal axis of said
3 nitrous oxide injection tube.

1 4. The injection plate of claim 2, wherein said fuel injection tube and said
2 nitrous oxide injection tube extend parallel to each other and are positioned in sequence
3 along the stream.

1 5. The injection plate of claim 4, wherein the axes of said bores of said
2 nitrous oxide delivery ports extend to opposite sides of said fuel injector tube.

1 6. The injection plate of claim 1, wherein each of said nitrous oxide delivery
2 ports is configured to direct nitrous oxide in a direction to flow primarily toward a single
3 one of the runners.

1 7. The injection plate of claim 1 and wherein said fuel injection tube includes
2 a plurality of fuel delivery ports, each of said fuel delivery ports configured to direct fuel
3 in a direction to flow with the nitrous oxide from one of said nitrous oxide delivery ports
4 toward one of the runners.

1 8. The injection plate of claim 7, wherein said nitrous oxide delivery ports
2 and said fuel delivery ports are characterized by having been formed by a ball nose end
3 mill and a rectilinear bit.

1 9. The injection plate of claim 7, wherein at least some of said nitrous oxide
2 delivery ports and said fuel delivery ports have a first bore intersecting its said tube
3 passage and a second bore intersecting its said external surface, and said second bore is
4 oriented toward one of the runners for directing flow to the runner.

1 10. An injection plate for positioning in a stream of fuel and air moving to the
2 inlets of fuel runners of an internal combustion engine for injecting fuel and nitrous oxide
3 into the fuel runners, said injection plate comprising:

4 a frame defining a frame opening for surrounding the stream of fuel and air
5 moving toward the fuel runners;

6 a nitrous oxide injection tube extending across said frame opening and mounted at
7 its ends to said frame and having an external surface and an internal passage for
8 communication with a source of nitrous oxide; and

9 a plurality of nitrous oxide delivery ports formed in said nitrous oxide injection
10 tube, each said nitrous oxide delivery port configured to direct nitrous oxide in a direction
11 to flow primarily toward the inlet of one of the runners.

1 11. The injection plate of claim 10, wherein

2 at least some of said nitrous oxide delivery ports include a first bore intersecting
3 said internal passage of said injection tube, and a second bore intersecting said first bore
4 and intersecting said external surface of said injection tube, and

5 said second bore oriented for emitting nitrous oxide primarily toward one of the
6 inlets of a fuel runner of a combustion engine.

1 12. A process of injecting nitrous oxide into runners that carry a fuel stream to
2 cylinders of an internal combustion engine comprising:

3 moving nitrous oxide along a nitrous oxide injection tube,

4 distributing the nitrous oxide into a plurality of nitrous oxide delivery ports

5 formed in the nitrous oxide injection tube,

6 as the nitrous oxide passes through each nitrous oxide delivery port, controlling

7 the direction of the nitrous oxide from each delivery port to move toward a different one

8 of the runners.

1 13. The process of claim 10, and further including the step of moving fuel

2 along a fuel injection tube,

3 distributing the fuel into a plurality of fuel delivery ports formed in the fuel

4 injection tube,

5 as the fuel passes through the fuel delivery ports, directing the fuel primarily

6 toward the nitrous oxide passed through the nitrous oxide delivery ports.